

WORKING GROUP 10

NATURAL RESOURCES AND CONSERVATION

Participants: Chris Wilson (Utah, Fisheries Experiment Station), Jim Peterson (Montana Fish Health Lab), Bill Cox (California Department of Fish and Game), Keith Johnson (Idaho Department of Fish and Game), David Bean (NOAA), Sue Marcquenski (Wisconsin Department of Natural Resources), Jon Stein (Arkansas Game and Fish Commission), Loraine Fries (Texas Parks and Wildlife), Scott Syska (Missouri Department of Conservation), Jennifer Ayre (Massachusetts Division of Fish and Wildlife), Robert Bakal (US Fish and Wildlife Service), Pete Walker (Colorado), Gary Egrie (USDA APHIS), Jim Winton (USGS Western Fisheries Research Center), Mamie Parker (USFWS), TJ Myers (USDA APHIS), Betsy Hart (National Aquaculture Association), Jill Rolland (USDA APHIS), Kevin Amos (NOAA Fisheries), Guppy Blair (USFWS)

Welcome and introductions by participants. Power point presentation and overview of the National Aquatic Animal Health Plan (NAAHP) by Guppy Blair.

OIE the WTO and why we need a NAAHP. Presentation by Dr. Jim Winton.

Fish and Wildlife Services Responsibilities and Commitment to Natural Resources. Presentation by Dr. Mamie Parker, Assistant Director of Fisheries and Habitat Conservation, USFWS.

Following the presentations, there was a question and answer session. Some of the State concerns initially aired included issues pertaining to fisheries management, aquatic nuisance species, invasive species, endangered species act issues and how the NAAHP is going to consider that fisheries managers have a broad array of issues they must consider in addition to health concerns. These issues must be considered when moving forward with the development of a NAAHP. Federal partners need to understand that these other issues are important.

Aquatic nuisance species have to be considered when moving fish in and out of States. Also the ESA and invasive species issues must also be considered. Even if the species is acceptable from an invasives or ESA point of view, there are other ecological considerations that must be taken into account. For example, mud snails and microorganisms, zooplankton or other organisms “piggy-backing” with a shipment of live animals. Beyond the health requirements that the NAAHP may have, it’s important that the state regulations are considered prior to issuing a health certificate to ensure that the other State requirements are met. States do not want a shipment landing at their back door and then having to deal with it. States prefer that they are consulted on a shipment prior to the health certificate being issued so that if the other ecological and health requirements of a State are not met, that then the Federal agency would simply not issue the health certificate. Once a shipment has arrived in a State that has met Federal

requirements but not State requirements, it could be too late and the problem has already arrived and the State has to deal with it.

Can Federal agencies have a procedure that requires that we (Federal permit issuing agency) check with a State regarding permits before we (Federal permit issuing agency) issue or approve something to come into the U.S.?

How do we create links between the Federal agencies, State Departments of Agriculture and State conservation agencies to ensure that everyone's needs are met?

Many new aquaculture species could be considered non-natives, foreign or even invasive. Again – we need to have coordination.

AFS policy #15 (Introductions of Aquatic species) was mentioned and that there needs to be a link between this policy and the NAAHP.

It's possible that one solution may be electronic health certificates. When filling out the certificate, if there was an automatic link to the States regulations, this could be helpful.

The interstate certificate of veterinary inspection (ICVI) may also be helpful as it can be linked to the system at the centers for epidemiology and animal health (CEAH) that store State regulations regarding fish and aquatics importations.

In Texas there are few protections and they are excited about the prospect of a model plan. There is a history of transplanting species, and having a guideline would be helpful.

Arkansas is in a similar situation to Texas regarding a lack of import regulations. However, the Arkansas commercial aquaculture industry is very pro-active on disease issues in the state. A majority of the baitfish industry is sending samples to Andy Goodwin (University of Arkansas at Pine Bluff) for disease inspections.

Some States are worried that they will be fighting Federal agencies in their effort to protect resources. There are not only negatives with the NAAHP. States also see many positive aspects of the NAAHP.

What is the scope of the NAAHP? Pathogen lists? Interstate movement requirements? Role of aquatic animal health professionals?

States want the NAAHP to acknowledge the legitimate role of States in controlling imports into their State.

APHIS' Responsibilities and Commitment to natural resources. Presentation by TJ Myers of APHIS explaining APHIS' authorities and how those interact with natural resources.

More questions and answers including what APHIS' role may be in the standardization of lab procedures and reagents. This was discussed in work group 3 and has been done within the scope of the ISA program and SVC program. This is one of the main areas the NAAHP will cover.

NOAA's Responsibilities and Commitment to natural resources. Presentation by Kevin Amos of NOAA covering NOAA's stewardship role and the proposed offshore legislation currently being considered in Congress.

END DAY ONE

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State and Federal jurisdictions, as related to Federal importations and described in the Rocky Plains letter, was discussed. States said that their concerns were broader than disease concerns. Letter addressed Federal requirements based on disease status. States looking at species issues, others also.

Participants were asked what are the things that you (State representatives) want to make sure are or are not included in this Plan? We can not come to consensus in this meeting due to FACA issues, but participants can inform us in this setting. Want to hear specific concrete problems. Including ideas for solutions.

A recommendation was made to use the Lacey act for further justification for this Plan. Not just refer to it in the Plan, but actively use it. A strong recommendation was made several times during the meeting to put on the, yet to be made, Federal import certificates that the import in question would "not cross State lines unless it complies with State laws."

In Massachusetts, facility classifications vary, will a federal program deny a certification for research purposes internationally or between States? Response: If a State has a permit system that may be sufficient. There are no import requirements from APHIS at this point for research. APHIS in the future may have import requirements for certain species. For a closed research facility, we may be able to waive some of the Federal requirements and rely on State requirements. Would refer to FWS if it falls under Title 50.

How will Title 50 be incorporated in this Plan? There will be some overlap of jurisdictions, and agencies would like to make it seamless. We do not want to duplicate efforts, but would mesh to help each agency. UK has a website for all aquaculture jurisdictions and permits necessary related to aquaculture with all agencies included. Click on permit for copy to fill out. Sue Marcquenski can send the website to the Task Force.

Plan would need to include State and Federal requirements which could be difficult as State regulations change. Good goal, but could be difficult.

Within a given State jurisdiction there can be multiple agencies, such as Atlantic salmon commission, etc. Requirements can change and this would need to be updated every time, or could be done yearly, or every other year. This has to be an interactive process. The Plan organizers would like to find out how this Plan will work for you (stakeholders), how other approaches can be considered, and find solutions to work for everyone.

In the Northeast, with New England Fish Health guidelines, it sets standards for States to adopt in the protection of salmon. These are guidelines that States can use to clarify their regulations and provide for more consistency. Works well for New England area. Would like to incorporate programs already used in States to work as a baseline of requirements, like a model program.

PNFHPC also has model program, not regulatory, similar program of adopting basic guidelines. States can be more restrictive. States can provide contact person in their State. Varies on which agency, person is in charge. NAA and AVMA list of primary contacts of all the States, is helpful. CEAH is working with this list in providing State requirements on an APHIS website. Possibly in 3 months will be available. Make sure not more than one effort going forth. May be more than one contact in a State. May give central location and phone number, job responsibility of the position rather than exact name, since names will often change. IAFWA in past had list of positions, contacts in States.

Another problem if the first person called would say that they were the contact, but not actually the correct department. In Great Lakes Commission, Rick Nelson had task of finding out what department and who was the fish health contact. Dept. of Ag may have regulations stating that they are the lead agency in some States, when it is actually a different Dept that issues the permits. Should have more than one contact for a State. May need to address both departments to address both aquaculture and natural resource issues in each State.

Action Item: Jill will find out status of CEAH project and report to this group.

Resource agencies of many States are dealing with the issue of commodity vs. stewardship and this needs to be addressed. Use of animals for consumption versus protection, i.e. wild fish. States are dealing with long range planning, 15 years in future such as transport and protection of the livestock industry for brucellosis, etc. There is a lot of overlap between commodity and stewardship. But wild fish can almost be perceived as sacred, ethical issues. It is a challenge how to manage fish and wildlife resources in face of changing perceptions. This also affects financial issues for the State. There is a natural alignment of state agencies with the FWS for natural resources stewardship because there can be deep philosophical issues involved. It is not black and white. State agencies would like more stewardship wording in the Plan. At the State level, current management efforts are to limit the impact of exotic species. This is an important issue for States. Question: What kind of wording is needed? Answer:

Recognize State primacy in fish and wildlife management issues. The response to the Rocky Plains letter was not viewed that way by some state agencies. Task Force: The APHIS letter came with idea of focus on disease programs, not the larger picture of other natural resource issues and concerns. It was not written as intended to fight over jurisdictions. What do we need to do to not send up red flags?

FWS is the closest agency to State natural resources, States' voice, but States need to be engaged. We (Federal agencies) need to hear you (State Agencies), to bring it forward. It is not currently being heard that this Plan is important and that State agencies want the FWS to help represent them, and to make it a priority for the FWS.

As a State agency, we usually hold public meetings, and have public meeting requirements while Feds have the Federal register. If States support the Plan, States will have a salesmanship job for the Plan. Aquaculturists need to be engaged as well for public meetings to go well. So will be difficult to get State agencies to buy-in.

Need to get State Depts. of Agriculture and State Depts. of Natural Resources communicating. Strategic planning guides for next 15 years important. "The Compass" was recently produced for the State of Idaho. In Idaho we used to communicate much more often with the Dept of Agriculture than we do currently. The Plan needs to be educated in the workings of the Dept of Agriculture. Response: APHIS is working on training for field personnel. State response: Again, more linkages need to happen. May be able to work through AFS and AVMA as resources for CE, etc. AVMA and AFS have been involved in the working groups. May be able to use AVMA model of liaison, etc. for communication in other groups such as IAFWA. There can be problems with the trickle down of information to all the stakeholders, and everyday aquaculturists. State agencies need to disseminate info also.

Need to get around problem of States having to take an import whether want to or not they want it. States need to go back to their directors being able to say the problem has been solved with needing a State permit beyond Federal one. Most States have their own permit system for species, stewardship issues, what waters aquatic animals can be placed in. All imports must be accompanied by a health certificate. Certificates need to include pathogens required for the State. Also to consider aquatic nuisance species. Certificate needs to say "State importing concerns will be addressed". Rocky Plains letter is true on stating jurisdictions for import. Letter focused on fish health, diseases, not species. A poultry importation from Mexico example was given. Disease requirements may be met, but if species requirements of State is not met, then importation does not come in. Also works for diseases if a State has a program for that particular disease, that State can reject the import as long as can justify it scientifically.

Recent EPA issues have increased aquaculture awareness of Federal and State requirements.

Not always is industry, but private citizens are buying animals. These importers also need to be informed on what is allowed into the State. As stated earlier, additional

stipulations can imposed such as...any animals that cross State boundaries, an additional certificate may be needed, or stipulations to the fact that the State may need to be contacted to see what permits are required. Also APHIS could help with an educational campaign in this topic. Brochures, etc. about risk to environment, make sure it is a safe import. Magazines can have orders that anyone can buy fish and this will involve movements of animals. This could be a big problem.

APHIS permits would apply to international imports. This would not be a national fish health permit for between or within States. An electronic certificate is being worked on within APHIS for terrestrials. At this point it includes a minimum framework, not a permit that APHIS would issue. It is up to the State and the person wanting the movement to make sure all requirements are met. States can use it if they want to under the APHIS system but for State's use with that State's requirements.

Import requirements include species, strain, number, lifestage, facility, 3-inspection history, destination, private license number, timeframe (usually 30 days for Idaho). The state can impose additional requirements such as egg disinfection. It is an electronic system and is for anything that crosses State lines to come into the State.

An example of live RBT importation from Germany was given. In this example would APHIS permit the importation of fish infected with *Myxobolus cerebralis* (MC), and would the fish be allowed into the country and the State would need to deal with? In theory, yes, but from our discussions here, the importer would need to check with State first and if the State has a fish health management plan (for *Myxobolus cerebralis*), then we (Federal issuing agency) would not issue the permit. The federal agency would talk with the relevant state agencies first. It would work like Title 50. We need to address the incorporation of checking with State first before issuing any Federal permits.

Another point that needs to be addressed is how to deal with transshipping through a State jurisdiction? This is confusing since ID does not require a permit to move fish through the State unless the destination for planting is within the state, while OR and MT do.

State would need to have scientific, risk-based justification. It does depend on what the State is doing to manage the disease. If the state is free of the disease, it would need proof to show it is free with a surveillance program. As part of the Plan, we would want to encourage different cell lines, if necessary, to look for certain pathogens. If the State never have had an outbreak, that can help with the justification. It would help if all parties affected by the Plan know in advance what is happening so it is not the States that have to come down on them for noncompliance. APHIS can again provide educational campaign so that hobbyists and others will know what is coming such as import requirements for SVC.

Tribal programs are another subject where individuals may not need to comply with State requirements. Within a State jurisdiction can be Tribal opportunities for import which could bypass State regulations. We are aware of the Tribes which is why we have an

APHIS liaison, such as to the NWIFC, part of WA co-managers policy. The Plan does need to have them on board using the same guidelines. The Task Force does not want there to be a legal contention or federal lawsuit. Partnerships will need to be built. Regional groups as the co-managers may be very helpful. This type of structure may not work in the Southeast. There are no organizations, all individuals, no compacts exist now. Need to continue to make APHIS liaison aware of this continue to work on these issues, which may take time. There needs to be a model that works, for them to understand there is a benefit in the process.

States want the exporter to know in advance what requirements are needed. Need info early. In past experiences, with international imports, all types of scenarios have been encountered such as from the producer, from State, from other country competent authority, etc. APHIS is aware and is getting these calls already. May need an aquatic section on the APHIS website as to who needs to be contacted. If State already requires what is needed federally, would farmed fish need an APHIS certificate? Response: A State certificate would be needed in addition to anything beyond that for species and pathogens not included in Federal plan. It needs to be clear what is needed within the Plan. States want the process to be less complicated than it is now.

For Title 50, live fish requires letter from the director. It is a courtesy to call the State, not in the requirements. There is a plan to add this requirement in the future. Could not deny based on Title 50 for *MC*, but could be based on State's requirements. Need State permit first.

What import restrictions do we need now? OIE list.

Is there communications with US customs and APHIS because sometimes border officials have contacted States even if it has passed Title 50 regulations? In working with ISA and SVC import certifications, APHIS has been working with customs through the port veterinarian coordinator. It is a problem in customs for ornamentals. There is authority within APHIS for farm raised ornamentals. Koi and goldfish will also have SVC requirements soon. Also no other diseases detected at the time of testing, and no signs of other diseases.

Also, in response to testing protocols, OIE sampling at 2% prevalence level is an increase in what certain States are currently doing and with tight budgets, this would be tough to do without additional funds. How does this apply to ESA-listed species? States sample sockeye as a "best management practice", but NMFS has never liked lethal sampling. Yet it is a normal practice.

Any consideration for adding KHV? No, due to geographic distribution, and lack of ability to detect the virus. Now it is widespread globally, and diagnostics need improvements. If diagnostics can't always detect carriers, and detection is only at certain times and temperatures it will be very difficult to manage. SVC is similar with detection at certain temperatures, etc. but it was considered that the entire was US free of SVC when it was first detected. And there was a strong desire to keep it from spreading.

Would APHIS certification good for a year? Or only prior to export? OIE in general is biannual testing at 2% level. Not just test when necessary, or during times when a particular disease. APHIS accredited vet and area office needs to know on continual basis what is happening at a particular facility and any mortality events.

Ornamentals can carry new and emerging diseases. How will this be addressed in the Plan? Response: Agreed, this needs to be addressed, and suggestions are appreciated. In California, the department of natural resources has authority over the regulations for new and emerging diseases including the type of wording used. WG 2 did have discussions pertaining to these issues.

With the OIE listing *Gyrodactylus salaris* and classification/speciation required to determine species, States are concerned of a double standard. Can we justify keeping it on the list? How can we show it is not present? It behaves very differently from other species of *Gyrodactylus*, it is very pathogenic. Must be able to differentiate this species from other *Gyrodactylus* which will require training. States need diagnostic tools to help support justification for keeping it out. Genetic tests, DNA probes are available for *G. salaris*. Sue can send contact information. Would like to be able to send samples to have them analyzed, PCR conducted, to prove States do not have this species. Would like to have federal dollars to do this. States need to help push for funding in federal agencies. OIE considers us free of *G. salaris* currently.

Emphasis is for States to see remedies of concerns writing. The Lacey Act is written in the introduction, but more references for natural resource issues and States roles in import programs are needed in the Plan. If states have specific language they would like to see, they can propose it to the Task Force for adoption. Make sure concerns are in the working group notes.

Presentation on APHIS partnerships by Jill Rolland.

How are assessments made for indemnification values for SVC? Assessor within APHIS determines the value of the lot in question. It has been a learning process particularly with Asian show market vs. other groups on values. Specialist with CEAH did records analysis. Indemnification is at 50% level with the expectation that the State would provide other 50%, however most States do not. One producer in Missouri was disappointed in value that was determined. It is OMB, not APHIS that decides on the final payment amount. APHIS personnel should not be telling producers what they might get. Need to work on communications within agencies, etc.

It is important to have more in depth understanding of APHIS programs, and reasoning behind them. First SVC facility was eradicated. State started quarantine, not APHIS as APHIS can not initiate a quarantine. Depopulation, disinfection was large project.

With SVC, industry met with APHIS and other experts. APHIS was very receptive in hearing what would work. Brought together many entities, experts in meetings to

determine what actions should be taken. Industry has been involved in the process. Not a threatening process in this way.

Presentation gave examples of different approaches and partnerships that can be formed for implementation of different parts of the Plan. NPIP is a good example/model for certification. Have conferences every 2 years. Have plan members that review new pathogens, etc. Industry helps decide what will be regulated, etc. Helps in getting all the stakeholders at the table to determine what diseases are of concern, etc. National shellfish sanitation was another example. Could this be a workable option in the Plan? NPIP plan only has 3 disease agents listed. Appears to be too few. 2 of the 3 have human health links. Emerging diseases may be more important in fish health than poultry. Not want it to be “my fish health issue of the week”, but one that is a significant disease on national level. Need good briefing documents. NPIP focused on breeders only until this year. Diseases that made the list were devastating to the industry. Is a way of getting all stakeholders together every 2 years, and look at changes that may need to be made in the poultry plan. It is a framework for certification of disease status. Fisheries have many more species, stakeholders, etc.

May want to hold groups by species. NPIP does with turkeys, chickens, etc. The rules for *Mycoplasma* within each species group, for example, are slightly different for different needs. Baseline standards, etc. are set within communications in these groups. Not only species, but different regional concerns can be complicated. This is why we have had so many different working groups in the development of this Plan. Process has needed to become longer to hear all the different needs, more groups by region, species, product differences, etc. Will be complicated to address in the Plan. Justifications and reasoning to come out earlier rather than later will be helpful.

Establish private pond retailer list. Brokering is rare, but there are few. How to deal with brokers who purchase from producers and then sell into public waters? It is not allowed to release in public waters in some states. Ponds with no escapement is defined as private waters. Fee-fishing trout areas can get special permit with special criteria.

In California you need a private stocking permit to stock fish.

Health certificates may not be helpful if a broker further divides fish into lots, unless they are all of equal health status.

NPIP could serve as a model in terms of roles and responsibilities as well as diseases. Testing, frequency of testing, laboratory standardization, etc.

The biennial conference convenes everyone who is part of the program and they vote on the changes. APHIS then proposes a change in rule and goes through the rule making process.

The model of bringing stakeholders together and work together on what’s going to keep the health plan ongoing, acceptable and updated.

The NPIP is voluntary. Until recently, it was primarily for breeders and there was 100% participation among breeders. Due to market forces, breeders have to be involved in order to stay in business.

Client relationship – how do we deal with notification to jurisdictions that could be affected from a particular disease event?

We have some authority to keep that information out of the public. Animal identification will likely address this issue.

Ability to do some proximity sampling in the area of the outbreak in public waters.

How could that be handled, particularly if it deals with interstate transportation?

IPN example – not found in Idaho State facilities and currently not in industry. How do you regain “freedom”?

If the water isn’t protected, you won’t be able to declare freedom if it is in the wild fish and they are in the water source used for the hatchery. The hatchery animals would be presumed positive.

Reportable pathogens are reportable to APHIS and to the State. APHIS utilizes accredited veterinarians and APHIS-approved laboratories. They are required to report findings of reportable pathogens.

PNFHPC also has a disease list and members have to report pathogen findings.

The wild fish health survey could be a mechanism to detect pathogens in public waters.

If there were an outbreak today, would States be informed if animals had been sent to facilities in their State prior to the detection?

At the time of the SVC outbreak, States were not given information about locations where animals were sent prior to the outbreak. States need to know what the answer is in the context of this plan.

States want awareness – we do not want people finding out about disease issues in their State a year later from an OIE report.

Will we manage on a strain basis – for IHN and VHS, for example? For VHS we’re still considering the North American vs. European strain.

For IHN in Idaho – it’s considered an endemic area, but that doesn’t mean certain zones couldn’t be declared free. Idaho would be considered endemic due to migratory salmonids carrying the virus.

Would like to see a clear understanding of how communication with the States would work in the case of reporting disease and keeping our State partners informed.

One of the main purposes of the plan is to identify the pathogens that are of concern and how we would deal with them, including contingency planning, so that we are prepared.

Disease lists. Information is under tab 9. Working group 2 report captures the discussions that went on concerning the pathogen list and criteria for being on the reportable and program disease. Much discussion focused on exotic and enzootic diseases, recognizing exotic diseases may be of high priority as well as enzootic diseases of limited distribution in the U.S.

Criteria for listing should be pro-active in developing disease response plans, and although the animals in question may fall under the jurisdiction of one Agency, we all need to work together.

Some question about whirling disease and BKD. Although they may not warrant being on a national list, they may be of regional concern or of concern to some States.

Tab 8 contains draft chapter 4 – reportable and program diseases. The reportable diseases are the diseases that we are obliged to report to the OIE regardless of whether or not we would act on a finding of these pathogens. Diseases we wish to do something about in some way are program diseases.

Is APHIS aware of the status of the OIE list diseases in the different States? We report to the OIE annually on the status of diseases “known to be present” or “not known to occur”, etc. NAHRS was developed for State Veterinarians to report on OIE list B diseases for APHIS to facilitate our OIE reporting. We do not have 100% reporting through NAHRS. OIE has since switched to notifiable diseases. It would be positive to encourage reporting of aquaculture diseases via the State Veterinarian via NAHRS. In the context of the NAAHP, we need to come up with a way to include everyone in reporting in a logical way.

What is the quality control mechanism within the database? The only mechanism is that it's the State Veterinarian reporting. We personally have no way of knowing if there are errors in the State's reporting. It's being migrated to the national animal health laboratory network (NAHLN).

What language should we be sharing our data in? There are larger groups addressing these issues!

With the NAAHP, will we need to include private, public, State hatcheries? Yes – in terms of defining our zones of presence/absence of pathogen.

Do we only want information from production facilities? Not necessarily. In terms of absence or presence, we may need data on wild populations as well. Also, resource agencies may want this information as well.

It's a step-by-step progression in terms of APHIS interest in aquatic diseases and presence or absence of disease. It's possible we would progress to not only the number of positive findings, but to locations, etc.

State resource pathologist reporting to the State veterinarian should report to APHIS at the same time to ensure it doesn't get lost.

The entire structure of how we think about reporting is changing from the OIE to APHIS. We do not have a good structure in place for reporting aquatic animal diseases. We want the State pathologists input on how to strengthen reporting. A suggestion is to include the life stage in the reporting. Example: status of broodstock, any subsequent findings in eggs, how the eggs are handled (disinfected). Date for collection, Species, life stage, date of isolation, location, pathogen and method of detection. Physical description of address plus GPS location. Need for a comments section.

Zonation idea can be positive especially in areas where, for example, IHN is present, but zoning the areas where it's known not to occur.

We need to specify in the draft chapter 4, that for diseases that are endemic, they are only reported annually. We need to specify how the reporting will occur.

New parasite in Wisconsin, and MN for consideration as a reportable or program disease. It's a microsporidian (*Heterosporis* sp) and is found in muscle tissue. There is a PCR test. First found in 2000. Known from angel fish and some other aquarium fish. Has been found in wild fish in the Great Lakes. It has affected the commercial yellow perch industry. Affects the filet quality. Fat head minnow, channel catfish, trout, coho salmon, walleye and northern pike can be affected experimentally. Has not been found to affect lake sturgeon, golden shiners, bluegills and smallmouth bass. It's not host-specific and affects the edible portion of the animal. Experiments are going to be conducted to see if fish eating birds can act as a vector for the spores. See www.glf.org for the fact sheet. It takes approximately 5 weeks from infection before white spots or lesions become visible.

Heterosporosis is on the Montana list of diseases to be tested for. Filets are examined visually and PCR tests performed.

Prevalence of the *Heterosporis* sp is highest in yellow perch, and found in other species, but not as prevalent.

Should *Centrocestus* be considered? It has just become reportable in Utah, but is not required in inspections. It's not species-specific. Is it highly pathogenic? That is in

question. Utah has native species in geothermal waters but Colorado has introduced species – changes the management strategies.

Is the national aquatic animal health plan going to deal with an issue like *Centrocestus* that affects sensitive species but not necessarily a national issue and certainly not an industry issue. Should we consider issues affecting sensitive native species in the plan and if so, how?

Where do you draw the line between national needs vs. state needs? Even if an issue is not addressed by the national plan, it does not mean it is not an important one.

Going back to the NPIP, having a meeting every two years to visit the NAAHP to address issues of importance, revisit the disease list and even to discuss disease issues that are important, even if they are not part of the plan.

We have time to review the drafts, including disease list, so there is time to get ideas on paper.

For sake of consideration: large mouth bass virus, white sturgeon herpes virus II, and whirling disease. These may be diseases of more regional concern. However, some may be of a national.

LMBV concerns. Not sure how worried to be about it. One state reported several years without kills, and no repeated kills. Although there has been a significant increase in effort hours to catch. Not sure if will reoccur. Some fisheries have returned to original numbers. Anglers are still concerned. Can this be dealt with as an emerging disease? A document of disease occurrences in the Plan would be beneficial to determine whether it will impact fisheries. Structure and resources for some of these unknowns would help address these issues, possibly also in research components. *Myxobolus cerebralis* is another example of a pathogen which was not known much about initially, but we know much more about now. States would like to address these gaps through the Plan. Awareness of where some of these pathogens are, versus having national program for them.

M. cerebralis is a significant pathogen, and may want it to be reportable in the Plan. Most likely no State would let in positive fish. Same applies for intrastate movement, except for ESA species, reared on *M. cerebralis* positive waters.

C. Shasta and PKD are also on some state lists. Zone concept can be used internally, within the US, not just for international shipments. Pathogen may be important, but would need surveillance to evaluate status of the pathogen. Most pathogens are not seen during inspections, but in diagnostics. Surveillance is valuable but most often see in diagnostics. Surveillance is an ongoing activity, not just targeted routine event. California has programs for managing *M. cerebralis* rather than closing down facilities as did on first findings. They have looked downstream of positive facilities, have caps on production to manage and stocking restrictions to control. If some states are allowing *M.*

cerebralis in now, industry would be concerned in putting on a national list. Would need to go back to a criteria list to determine if would be put on a national list. Statement made that every state has some type of management plan for *M. cerebralis* and should be put on a national list. States do have management plans for other pathogens also, but do not necessarily fit criteria for national list.

No matter what type of facility a pathogen is found at, and is reportable, action taken may vary including restrictions for transport. Another possible category is reporting pathogens, the status of which are an interest to States. Originally, the Reportable list for the Plan had been more for the OIE pathogens. Plan may want to acquire knowledge of where pathogens are for future zoning purposes, but not necessarily to initiate programs.

Could have one long list of reportables then draw from list for the OIE list of reportables. In state of Utah, some inspections are required for endemic areas only, so it is necessary to know where these pathogens are localized. May only be necessary for transport within states rather than for international.

C. shasta can be found in anadromous adults. Primary intermediate host only occurs in certain areas, so not as much of a concern. There are many ecological aspects of some pathogens to be able to make a judgment call. Need this type of information to make those decisions.

Differences of disease lists need to be made clear. Historically once diseases are placed on such a list, there is a tendency to automatically adopt restrictions without further thought into the reasons for listing in the first place.

Chapter 4 is on the website for comments. Section 4.2 on criteria for reportables and list.

B1. on page one. Mortality rate specified is very large. Needs to be indexed to size of fish/stage of growth. IHOT is .1% in fingerlings. Need language to explain A and B comment. Is it "A and B" or "A or B"? Should be "or". Both can be on the list.

Under PAAD definition, all the PAADs are RAADs. The word suspicion should be defined. Refer to OIE definition. Could be interpreted differently as in a laboratory test before confirmation. Want to know what makes sense for us, not just OIE.

Section for significant pathogens for States for reportables could be very valuable for state resource agencies to buy-in to the Plan. *M. cerebralis* is still seen as important for other countries to know where it is. Also for international exports of national concern. It is other countries' responsibility to request this information from us, not our responsibility to inform them without their request. If these lists are forms, there might be an expectation, if we are signing export health certificates, that the aquatic animals in question are free of any other pathogens that we know of that are not on the list for certification.

Within NW, most significant pathogen is *Flavobacterium psychrophilum* (BCWD) in conservation fish hatcheries. Is it still the expectation that we would report on a certificate even if not on their list to test for? Ethical question. It would be up to other country to still take in or not.

Action item: Send us comments to be included even after leave this meeting.

WG 1 Roles and Responsibilities of Aquatic Animal Health Professionals:

Difficult to anticipate needs into the future. APHIS has to have accredited veterinarians to sign their certificates. For NOAA and FWS, AFS certifications may be sufficient. There is no real aquaculture specialty within veterinary medicine, and limited education opportunities in vet schools. APHIS is looking at a vet aquaculture accreditation specialty, field training for APHIS vets.

There may be a need for labs to be approved for certain testing, or people for Plan activities, etc. Need criteria for labs and personnel for certification. Veterinary involvement discussed. Varies greatly on the type of industry and economical considerations. Different scenarios discussed in WG 1, though no decisions have been made.

In the California Department of Fish and Game, there are no certified fish pathologists and only one veterinarian. How would their role be in NAAHP? This would still need to be determined. All could be AFS inspectors, but there is no incentive to date. In the Plan, for consistency, there needs to be something to say they are qualified or recognition that they have known qualifications. Requirements vary greatly by States for inspections. The Plan would help for consistency. Certification would add credibility to Plan. If certain states require inspections by veterinarians for importation or AFS certified professionals that could be an incentive in other States. For lab techniques, the American Society of Medical Pathologists can certify individuals.

Certification also helps for establishing and showing competent authority. It also can be helpful to justify increases in salaries for staff.

Having accredited veterinarians do the work, also helps with accountability, legal issue, not to be exclusive of non-vets. Certifying people or labs? AFS won't have resources to certify labs and look at QA/QC.

APHIS approved labs are meeting needs currently, but not always convenient. Number of animals moving globally is increasing. Expect increasing need for approved labs.

Still will be many opportunities for non-vets as in NPIP example. Non-veterinarians have trained veterinarians in many cases. Fish health specialists and non-vets will still be recognized with their expertise.

Would like, through the Plan, to have vet schools train vets appropriately for aquatics. But not much funds for vet schools, and substantial money is not generated to increase these types of training in vet schools. There is a need to heighten awareness for training needs in vet schools. This could take 10 years to see changes and impacts in vet schools. Aquaculture accreditation specialization should make a difference for awareness of the field and training needs. CE or reaccreditation every 3 years are options. Can be online, 1 hour courses. Different tiers of specializations for vets with different levels of activities with transports of livestock, etc.

Many of the conservation agencies may be able to help with the training. Also with CE training through AFS. APHIS may be able to help with CE credits in aquaculture for vets to help fill need for this. AquaVet1 can help with hands-on, in depth, longer training. Costly for students, but may need to find scholarships, etc. 5-6 weeks as in this course may be too long, but may work for vet students, during internships.

Not just providing opportunities for training, because there are some out there, but there isn't that much interest within vets either. 2-6 students per year for the past 10 years in the 4th year of vet school from Davis have come to the CA lab. All are interested, but none have positions in fish health. Plan may change this by increasing incentives for vets. Currently not much profit for vets in fish health.

Jill gave the example of Norway with increased need for fish health professionals where there wasn't previously, including for non-veterinarians.

Encouragement given for States to inform producers about the NAAHP.

END DAY 2

Review of working group 3 – laboratory methodologies under Tab 9. The group met in April of 2004. AFS, Micro Technologies, AVMA, ATCC, Maryland Dept. of Natural Resources, Texas Vet. Diagnostic laboratory were represented.

Looked at models for approvals – ISO certification as well as different approvals for individuals. These included AFS certifications, etc. For a Federal program, it was recognized to have a need for approvals for credibility of the system.

Possibility of a network of approved labs (includes all the Fed agencies) could be useful.

QA/QC was discussed, including proficiency testing. ISO is seen as a good model and internationally recognized. A goal may be to be compatible with ISO to start out with as there are costs associated with ISO certification.

Standardization of reagents, media and cell line. Currently networking with other laboratories is the norm and in some cases going through ATCC. QA/QC could assist in assuring reagents, if not exactly the same, are compatible.

Availability of some reagents is a problem and we recognize that would need to be remedied in the NAAHP.

Testing methodologies – The AFS/FHS & FWS “Standard Procedures for Aquatic Animal Inspections” and OIE manual recognized as possible methods. OIE methods are more broad, and the FHS-FWS has much consensus with OIE, is updated yearly, and may be a better model.

The comment was made that new suggested methodologies for the “Blue book” are not necessarily validated prior to publication in the updates. A response from a committee member for the updating committee has pointed out that it is not the case that the new methodologies are not validated – they are. There has to be peer reviewed literature supporting the change; there needs to be justification as to why the methodology is better.

Is there an issue with “adopting” the Inspection Manual for the plan? Federal agencies cannot adopt a document produced by another group, so the idea was discussed about using the same group that works on the Inspection Manual to either be an advisory committee or somehow be able to use the manual for a Federal plan. Legal counsel for APHIS was consulted on whether or not we could “endorse” or “adopt” the Inspection Manual.

It is suggested that we adopt the FHS-FWS Inspection Manual for the plan. In the working group itself, it was suggested that these methodologies be used. However, we may have to come up with other ways to use the same methodologies, other than adopting due to legal issues. These are the methods that States have adopted and therefore it makes sense. It can be suggested in the implementation stage that the Inspection Manual be used.

The protocols would be used for NAAHP activities, whether for export issues or program-related activities such as testing in conjunction with SVC and ISA programs. The idea is that the protocols would be the same as the inspection manual.

A suggestion is being made that the protocols be available and timely.

Briefing sheets on diseases currently not being tested for that are suggested for the NAAHP would be important so that States understand what the potential impact could be if the disease was imported (such as EHN, OMV).

APHIS puts out fact sheets and impact worksheets for certain diseases, and we could look into having these put together for the diseases referenced to above.

A comment was made that when SVC was first found in the U.S., we were unable to confirm and had to send the sample to a foreign lab. Although the situation for SVC has been remedied, there are other foreign animal diseases we might not be able to test for.

Will there be training for labs in the network for NAAHP? Yes, personnel will need to be able to identify all the foreign animal diseases.

“Suspicious cases” – many people think this means that the sample must be sent to NVSL immediately.

Action Item: APHIS will send a letter regarding when suspects should be sent to NVSL.

As a co-competent authority, FWS should be able to do the confirmatory work for SVC in wild populations.

There are also some issues in semantics about what “suspicious” means.

The suggestion was made to include “suspicion” in the definitions section of the NAAHP.

Suggestion to revisit what “competent” authority means for the three agencies. Needs to be further defined particularly in regards to when a “suspicion” is sent to NVSL.

There was a koi herpes virus isolation in Idaho a year ago. The State lab contacted the FWS lab to ask how to proceed with the suspect isolate. The mechanism was very helpful as it is not the Dept. of Fish and Game’s mandate to deal with koi. Having such a mechanism in place is valuable.

Lab and personnel certification – individual vs. entire lab personnel. Could be a team of Federal employees, or team to approve labs. It would be helpful to use each others expertise. This would be for labs doing both export work and also surveillance work in conjunction with the NAAHP. Will there be any work about geographic location of the approved laboratories for NAAHP work? Yes – we need to see where gaps are in locations of services.

Proposals for fish health regulations for Canada. Tilapia inspections are being carried out for salmonid diseases. Will there be more of a screening of live fish going into Canada?

Some background on the Canadian system: The Canadian Food Inspection Agency will become the regulatory branch for aquatics and DFO will remain the research arm. We are working together to have similar zones where we share waters and to make sure in those areas we have similar approaches to disease management. Specifically for tilapia imports and the panel of tests, we are not sure.

Example of trade notices from foreign countries that come into the Federal government. We provide technical opinions on notifications concerning aquatic animal health issues. The trade team then sends comments to that country that is then expected to take these comments into consideration prior to implementing the new guidelines.

Ensuring ability of diagnostic and certification capabilities. It is suggested that this should be a priority for the NAAHP. Labs can be backed up and some labs have to contract work out. State budgets are very tight and to have the Federal government provide funds for these services would be very helpful particularly in meeting the needs of private growers. Whether it's new labs or bolstering up existing labs, making this a priority is important.

What are the short-term and long-term needs of the States right now for diagnostic and certification capabilities? Would charging a fee be acceptable?

In Wisconsin, the samples now go to the Wisconsin diagnostic laboratory. Fees for sampling are only enough to cover supplies – not the cost of personnel. If personnel costs were incorporated into the fee, the DNR couldn't afford to pay for the testing. So, if there is a nominal fee, that's ok, and a subsidy would be helpful to cover costs. Private producers have to submit samples via a veterinarian to the veterinary diagnostic lab.

Texas does its own diagnostics, but can tap into a network as well. The private producers can submit to the Texas veterinary diagnostic lab for a fee – they do not need a veterinarian to submit the samples.

California is an importing State, not a large exporting State. Contract with UC Davis and WADDL to do certain diagnostic work. Hatchery tests go through the State lab. Private growers also go through the State lab. Certification work for listed pathogens go through WADDL and UC Davis. The shellfish pathology lab is on the coast. Histology and PCR-based work is all done in-house. Jim Moore is the shellfish pathologist.

Missouri Department of Conservation can provide free certifications and diagnostics to producers and state hatcheries. Missouri has the capability to do its own diagnostic work and in some cases utilizes the network of labs via the Southeastern cooperative. Also use Micro Technologies for tests that need to be done in an approved lab, may use Guppy and Andy Goodwin's labs, depending on the sample/pathogen. Missouri once had a producer that shipped regularly to China and fees for testing for export certification may come at a cost. The producer then has to pay for the fee themselves. The producer decided not to pursue the export certification due to fees.

The Fish Pathologist for the Arkansas Game and Fish Commission (AGFC) performs diagnostic work for state owned hatcheries. The commercial aquaculture industry has most of the diagnostic and inspection work done at Andy Goodwin's lab at the University of Arkansas at Pine Bluff. The AGFC has little to do with the diagnostics in the private aquaculture industry.

In Utah, bacteriology, virology and parasitology for own facilities are done by the State. They are in the process of getting PCR, previously sent these out. Follow Blue book procedures. What the Agriculture department does with private growers is not known.

Producers were using FWS fish health centers for diagnostics. They may also be using WADDL and Pisces.

Colorado – does not require PCR for whirling disease. Colorado requires annual certifications of salmonid facilities and for eggs for interstate and intrastate shipments. Same standards for within State and out of State movements. State laboratory performs bacteriology and whirling disease for that part of the inspection for private growers. Virology usually contracted out to FWS Bozeman, Auburn or WADDL. Lab reports are sent via State office. Close to being certified by APHIS and should be certified shortly. Strongly considering gearing up to do virology, but cannot hire additional personnel. Has a DVM on board who signs certificates.

Massachusetts does own fish health inspections and diagnostics. Do get some help from Lamar (FWS) in terms of supplies. Most New England private growers use Micro Technologies, Inc. Lamar does not do any State or private inspections in New England, they only inspect Federal facilities. Connecticut contracts out to Micro Technologies. Troublesome cases go to Lamar or Micro Technologies. Private growers would love to have a private inspection.

Testing and inspections are not free at all FWS laboratories. More and more FWS has to require fees.

For the ISA program, APHIS has contract with Micro Technologies and APHIS covers the fees for sampling.

For Idaho, there are fish health centers in adjacent States such as the two centers in Washington, the Idaho fish health center within the State, and the State's own lab in Eagle. They do the inspections and monitoring of stocks in those stations including 21 hatcheries. They do some wild fish health surveys targeting pathogens including *Myxobolus cerebralis*. There is need for consistency at a Federal level in terms of who is charging fees and who isn't, and who is running what tests. It's always been "who do you know"! You contact those people and ask them to run tests for you. It creates problems for database and tracking samples that are not done by the State and wondering if testing was done by appropriate methodologies. Private industries use the FWS lab and the State lab, but nobody is really looking at the trout production industry if not transporting fish or eggs. Through the PNFHPC, Clear Springs is involved in that group so that the State and Feds know what's going on there.

Idaho lab capabilities are pretty good, but States would like to see consistency in availability of Federal resources.

Also more needs to be done by the Idaho Fish Health Center to look at producers who sell to private ponds within the State. Idaho Department of Agriculture has aquaculture responsibilities, provided it's within an agriculturally-licensed facility. Fish and Game jurisdiction is for planting in private waters and importation. We need adequate inspection, particularly of smaller growers. Brokering is another issue.

Private programs covered by Idaho Fish Health Center. One private program is monitored by the State because...???

Referring to the current National Wild Fish Health Survey info – would like it to become available to State resource agencies. The US Fish and Wildlife survey is working on it – there are some problems with the program/data base.

Idaho has not seen a new disease (except KHV!) in several years.

Texas does it own parasitology, bacteriology, virology and PCR. They do annual inspections of public fish hatcheries and maintain a database of the information.

Some areas of the country have regional committees – PNHFPC has a charter and membership. It's a valuable forum to get together twice a year to run through what's new, what's significant and what changes are coming both from a fish health perspective but also programmatic changes. Very valuable for information exchange, particularly with the shared waters.

Rocky Plains is less formal but regional forums are important for informing each other.

Another group is the Colorado River Basin fish disease group. They have been somewhat inactive in recent years and are showing signs of becoming active again.

What about the concept of including industry in these groups and enlarging them to be broader? It would be helpful if we came up with a list of 2 or 3 groups that would be most strategic to attend in terms of dissemination information about the NAAHP.

People were thinking more about these groups getting together, not just for the purpose of the Task Force to explain the NAAHP. Should this include extension agents? In Idaho, the Agriculture Department isn't as engaged as the extension agent.

There is the idea of bringing the State Veterinarians and State directors of natural resource agencies together in two big east/west meetings to both inform them and create connections. It may be beneficial to have a forum where we bring these groups together so they can begin talking to each other. The Agricultural department collects the licensing fee, but has little idea about what is going on in private aquaculture. The APHIS AVIC has been to the State lab, and that was helpful, but not sure if that involvement in general is going to happen. The door is still open.

The PNHFPC is a great forum to reach out to a variety of people. More readily allows people from outside the group to participate. From California's perspective, it would be a good idea to invite the executive secretary from California Aquaculture Association, Fred Conte, the UC Davis aquaculture extension specialist, Bob Hulbrock, and the State aquaculture coordinator (also on NASAC) to the PNHFPC meeting. At the PNHFPC

meeting, we need to address the fears that resulted from the Rocky Plains letter, much as they've been addressed at this meeting.

Comment on WG 5 report: California does not allow tilapia imports – this is incorrect. Movements are restricted but imports are allowed.

Piscirickettsia-like organism in tilapia – the first time Keith had heard of it. What do we know about it? **We would have to go back and ask the warm water group.**

Review of some of the working groups of particular interest to the group: tropical and aquarium fish (WG 6) and baitfish (WG 8).

Tropical and aquarium group met in Tampa. Farmers breed, they also import and distribute all over the world. Miami, LA and Seattle are large importing ports. Biggest freight in and out of the airport is tropical fish except in the winter. Florida has a good cooperative program with the Universities and APHIS to work with industry. They have a good lab, run by Craig Watson. APHIS has a VMO stationed at the lab.

The perception the Task Force received was that the tropical fish industry deals with disease issues. Commerce is important for them and the ability to move product. They feel their in-house disease control programs are sufficient for managing issues.

However, we do know that exporters in Malaysia and Singapore mix wild and farmed fish. These shipments can be many species and varieties of species. It would be challenging, and possibly not appropriate, to do health inspections.

Where the fish go and how they are handled are important issues, such as the potential impacts of releases (snakehead, etc.).

Needs: export health certificates, biosecurity, in-house disease control and management, treatments for health issues and these needs are being met.

Industry is grateful for State and university support on health issues. Livelihood is dependent on moving animals and anything that slows it down could be devastating.

Most of the people present at the WG 6 meeting were from Florida, and needs of other folks and in other States may be different.

There are challenges we will need to address concerning escapes and diseases.

From a State perspective, the whole concept of ornamental fish is such a black hole due to the potential for exotic pathogens and even human pathogens and drug resistance since the animals are exposed to so many antibiotics. Many ornamentals are specifically exempted from fish health requirements.

Everglades have massive populations of ornamental fish and other issues like the snakehead. There are some significant issues of escapes and possibly diseases. *Centrocestus* sp, KHV and SVC likely came in with ornamentals. There's also an aquatic nuisance species aspect as well, such as the *Melanoides* snails.

Hot springs in southern Idaho used for cottage industry ornamental breeding – also in Alaska.

It may take some creative approaches to work with them. There are the farmers/local producers and then there are the importer/brokers. KHV and SVC are the major concern: producers create a goldfish/carp hybrid that could be susceptible to SVC and possibly KHV. Native cyprinids have been challenged with KHV and 100% mortality results, but no re-isolation of virus. The kill rate is noteworthy.

Work Group 8 Baitfish

Different needs for coolwater baitfish and Koi than other ornamentals/tropicals. Baitfish growers in AK have been proactive. Testing has been done through Andy Goodwin who did not wait for an SVC certification program. They have a state program, which could be incorporated into the NAAHP. SVC, KHV and anchorworm diseases are of concern. Also Eric Park, a PhD and farmer, is involved. Self-regulating, biosecurity is in place. Needs are being met, but they want a certification program in place to facilitate interstate movement. There is much movement of wild bait in Great lake areas without certification, while farm certified baitfish are not allowed in some States. The US imports baitfish from Canada, but we are not able to export to Canada. Certifications in Arkansas are based on OIE guidelines and HACCP guidelines. Producers wanted secure water sources and known animal movements, and how depopulation might take place if needed. The participants of this working group also liked the idea of developing their own contingency plan that APHIS could use.

How might depopulation take place if it is needed? If producers can develop contingency planning themselves that APHIS finds acceptable and could use, that would work fine.

If a pathogen is found in a watershed, how will the Plan deal with that? Similar to how APHIS might deal with it? Equity among wild and farmed animals? Eradication is not always an option, depends on the case.

Certification is not without costs; industry is paying for it now themselves in Arkansas, but it does allow for some market advantage. There is a problem with mixing stocks with varying certifications and calling them all certified. That is misrepresentation of the certified lot. Will there be liability problems?

There is a concern of wild caught baitfish being brought into the States. Also there are nonfish bait issues. These “nonfish” can be intermediate hosts such as live leeches endemic species in Idaho, but which grown larger. There are many gaps in knowledge. Crayfish and other crustaceans—native one can be used as bait in Idaho if it is used in the

watershed to which it is native. Through the use of shrimp for bait in California it is possible to transfer white spot even if the shrimp have been frozen. This issue was discussed in the crustacean working group and needs to be addressed in the Plan. Use of herring for bait potentially could have VHS even if frozen. Freezing inactivates some viruses and reduces titers. California has not observed epizootics to date, but wants to prevent them and do risk assessments to be informed to make educated decisions. Evaluate the product itself as vector of disease.

Processing technology issues. Referring to killed product for human consumption and bait, will there be any consideration on social acceptance of radiation for bacterial reduction, etc? Electrical radiation is another option. This has been looked at also for carcasses. Found not to be cost effective in this case, but could be a part of risk mitigation, especially for food consumption. Possibly help with bait disposal also.

Further opportunities for States' input into the NAAHP were discussed including this WG report comments, NAAHP webpage, East/West meetings, IAFWA, USAHA, potential to invite us to other meetings to speak. State representatives at this meeting are also encouraged to speak to other State fish and wildlife health professionals, their State administrators, etc.

Main message must be that the NAAHP will not interfere with States in protection of their natural resources.

What about sturgeon? We recognize new aquaculture species, and the marine aquaculture effort. We have not yet determined if we need to have a working group to address some of these other species. Also consideration of these new species will be given at the research and priorities group.

Evaluation forms filled out.
END OF WORKSHOP

Summary of Evaluation forms

Question 1: Was the workshop well organized?
All strongly agree or agree

Question 2: Were the workshop objectives met?
All strongly agree or agree

Question 3: Did the facilitators work effectively?
All strongly agree or agree

Question 4: Were the resource materials in the workbook satisfactory?

All but one strongly agrees or agrees. A workbook was not available for one person at the meeting time and that person had no opinion on the topic. Another person appreciated the controversial content of the workbook (the Chris Wilson letter) and thought it was a very open process.

Question 5: Did the concept of the working group work well?

All strongly agree or agree

Question 6: Was sufficient time utilized for the topic of the working group?

All strongly agree or agree

Question 7: Were the meeting facilities satisfactory?

All strongly agree or agree

Question 8: Did the participants' understanding of the emerging aquatic animal health issues and the development of the NAAHP improve based on the workshop?

All strongly agree or agree

Question 9: Did participants at the workshop adequately represent government agencies and stakeholders?

Most strongly agree or agree. One had no opinion and one person disagreed, but said it was not the fault of the organizers. People were invited, but could not attend.

Question 10: What different approaches, if any, could be made to make future workshops more beneficial?

- Two people commented that it was very good to have Federal agency Task Force supervisors present as it shows the agencies are committed to the Plan as well as adding good "big picture" comments that helped address the group's concerns.
- Two people recommend contacting state people earlier (at least 2 months before the meeting) to get more people to attend because it can take several weeks to get out of state travel approval and if it is denied the Task Force would have time to find a replacement.
- Recommend name plates on the desk in front of each person with name and affiliations.
- Two people suggested asking participants, in advance of the meeting, for their concerns and questions to help Task Force members prepare for issues that arise and direct the agenda.

Other comments:

- From an attendant of multiple workshops, this was the most effective and definitive one, especially in terms of the goals and scope of the plan and helped to allay the fears of state agencies.
- Federal agency representative presentations did openly solicit input.
- The species groups approach is important to handle regional issues.

- State diagnostic labs need to see a benefit in the APHIS laboratory certification process.
- An EHNV and Crayfish plague (as well other unfamiliar diseases) briefing sheet would have been helpful.
- Solicit input for research priorities from state resource agencies, and ask state Departments of Agriculture if they have aquaculture responsibilities.
- Need NVSL to provide standardized diagnostic reagents and cell lines.
- Diagnostic labs will need cell lines capable of culturing viral pathogens such as the White sturgeon iridoviral disease virus, etc..
- Attendants gained a better understanding and appreciation for the complexities of developing a NAAHP.
- The approach of coordinating and collaborating with 3 federal resource agencies is very important in developing the NAAHP. The Plan is a great mechanism to provide guidelines to state resource agencies for consistency in developing state regulations.
- The Plan should be a mechanism for getting “new money” to support the implementation of the Plan.
- At times the meeting got away from the agenda. It could have been moderated better.
- Good articulation by the Task Force that comments by the representatives were just for consideration. It was clearly stated that there would not be promises or expectations to definitely include remarks, but it was very apparent that everyone was listening and open to new ideas.
- The entire Task Force was very courteous and obviously not set on steering the group toward a certain predetermined perspective. All appeared genuine and sincere, with the goal to hear ideas from everyone.